THE JOURNAL OF SCHOOL HEALTH

Vol. XXIV No. 7

SEPTEMBER

1954

TWENTY-EIGHTH ANNUAL MEETING
of the
AMERICAN SCHOOL HEALTH ASSOCIATION
BUFFALO, NEW YORK — OCTOBER 10 through 15
HEADQUARTERS, HOTEL STATLER

PUBLISHED BY
THE AMERICAN SCHOOL HEALTH ASSOCIATION

AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

Devoted to the interests and advancement of those engaged in school health activities and the service rendered by them

Officers of the American School Health Association

Oct., 1953 to Oct., 1954

President:

H. F. Kilander, Ph.D., New York University, N. Y. C.

President Elect

Kenneth Gibson, D.D.S., Detroit, Mich.

Past President

Guy Magness, M.D., University City, Mo.

Vice President in Charge of Program:

I. P. Barrett, M.D., Fort Worth, Texas

Vice President in Charge of Membership:

J. K. Rash, Hs.D., Bloomington, Ind.

Executive Secretary-Treasurer

A. O. DeWeese, M.D., Kent, Ohio

Editor-in-Chief:

Marie A. Hinrichs, M.D., Chicago, Ill.

GOVERNING COUNCIL

Term Expiring 1954

Mildred Doster, M.D., Denver, Colo.
Fred V. Hein, Ph.D., Chicago, Ill.
Lloyd F. Richards, D.D.S., Concord, Calif.
Lyda Smiley, P.H.N., Redlands, Calif
Ruth Weaver, M.D., Philadelphia, Penna

Term Expiring 1955

V. K. Volk, M.D., Saginaw, Michigan
Delbert Oberteuffer, Ph.D., Columbus, Ohio
H. S. Hoyman, Ed.D. Urbana, Ill.
Charles Pemberton, M.D., Houston, Texas
Miss Patricia Hilliard, R.N., Hammond, Ind.

By special vote of Governing Council

Jay A. Myers, M.D., Minneapolis, Minn.

Past Presidents, Ex-Officio

William E. Ayling, M.D., Syracuse, N. Y.
Gertrude E. Cromwell, R.N., Denver, Colo.
Paul Kinney, M.D., Altadena, Calif.
Guy Magness, M.D., University City, Mo.

Term Expiring 1956

Emily Brown, R.N., Elizabeth, N. J.
Warren Southworth, M.D., Madison, Wisc.
Donald A. Dukelow, M.D., AMA, Chicago, Ill.
L. M. Corliss, M.D., Denver Colo.
Irma Fricke, R.N., Evanston, Ill.

Affiliated Associations

Am. Ass'n Health, Physical Education and Recreation
Elizabeth S. Avery, Ph.D., Washintgon, D. C.

Michigan Ass'n A.S.H.A.
Goldie Corneliuson, M.D., Lansing 4, Mich.

California Branch A.S.H.A.
C. Morley Sellery, M.D., Los Angeles, Calif.

New Jersey Branch A.S.H.A.
Emily S. Brown, R.N., Elizabeth, N. J

New York Branch A.S.H.A.
C. Adele Brown, M.D., Oswego, N. Y.

THE JOURNAL OF SCHOOL HEALTH

Vol. XXIV SEPTEMBER, 1954 No. 7

CONTENTS

Growth in Adolescence 179
Joseph A. Johnston, M.D.

Color Blind 184
Ira Onken and Leona L. Weaver

Report of Committee on Tuberculosis—
I School Accreditation in the Riverside Sanatorium District 187
Lewis S. Jordan, M.D.; S. A. Slater, M.D.; John W. Towey, M.D.

II Tuberculin Test as a Guide 192
David T. Smith, M.D.
Discussion by H. D. Lees, M.D.

Report to Policies and Practices Committee ASHA 195
Lyda Smiley

Annual Meeting American School Health Association—Program 196

Meeting—American Public Health Association 199

Reviews, News, Notes 200, 201

Rhode Island Nurses Contribution 202

THE JOURNAL OF SCHOOL HEALTH

THE AMERICAN SCHOOL HEALTH ASSOCIATION

Chicago, Ill.

Published monthly, except July and August, at Buffalo, N. Y.

Editor-in-Chief

MARIE A. HINRICHS, M.D.
Chicago, Ill.

Assistant Editors

DONALD A. DUKELOW, M.D.
Chicago, Ill.

EDWARD B. JOHNS, Ed.D.
Los Angeles, Calif.

GERTRUDE E. CROMWELL, R.N.
Denver, Colo.

ABRAM COHEN, D.D.S.
Philadelphia, Pa.

SUBSCRIPTION RATES TO THE JOURNAL

Membership dues, $3.00 including Journal: Subscription $3.00

Single copies 35c, send payment with order

Address all communications to

THE EDITOR, The Journal of School Health
Room 617, 228 No. LaSalle St., Chicago, Ill.

Copyright, September, 1954, by
The American School Health Association

Entered as second-class matter at the Post Office at Buffalo, N. Y.
October 5, 1937

To insure delivery on the following month, a subscription must be in the hands of the Treasurer not later than the 20th

MEMBERSHIP APPLICATION AND JOURNAL SUBSCRIPTION

American School Health Association

I,....., hereby apply for membership in the American School Health Association and enclose $3.00 for annual membership dues, including a year's subscription to the Journal of School Health.

Date..... (Signed).....

....

Official Position Address

Date.....

Please fill out and send with check to A. O. DeWeese, M.D., Secretary and Treasurer, Kent State University, Kent, Ohio

Members of three years' standing are eligible for Fellowship—dues $6.00

Not applicable in Michigan—under joint membership agreement between ASHA and MSHA (G. Robert Koopman, Secretary-Treasurer, Dept. of Public Instruction, Lansing 2, Mich.) MSHA has an active membership ($4.00), a fellowship ($6.00) and an institutional membership (two active members—$8.00), all of which carry Journal of School Health subscriptions.

Cut out and mail or hand this to a friend

REPRINTS

Reprints should be ordered within twenty (20) days after issue of the *Journal* in which the article appears.

Prices are dependent on the length of the article, including space occupied by cuts and other illustrations.

Must order within twenty days of date of issue. Carrying charges extra

The Journal of School Health

is printed by

RAUCH & STOECKL PRINTING CO., INC.

120-130 ELMWOOD AVE., BUFFALO, N. Y. (near Allen)

Modern equipment and a staff of craftsmen place us in a position to compete favorably for publications and general printing

Universities and organizations are invited to submit their printing problems

THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XXIV SEPTEMBER, 1954 No. 7

GROWTH IN ADOLESCENCE

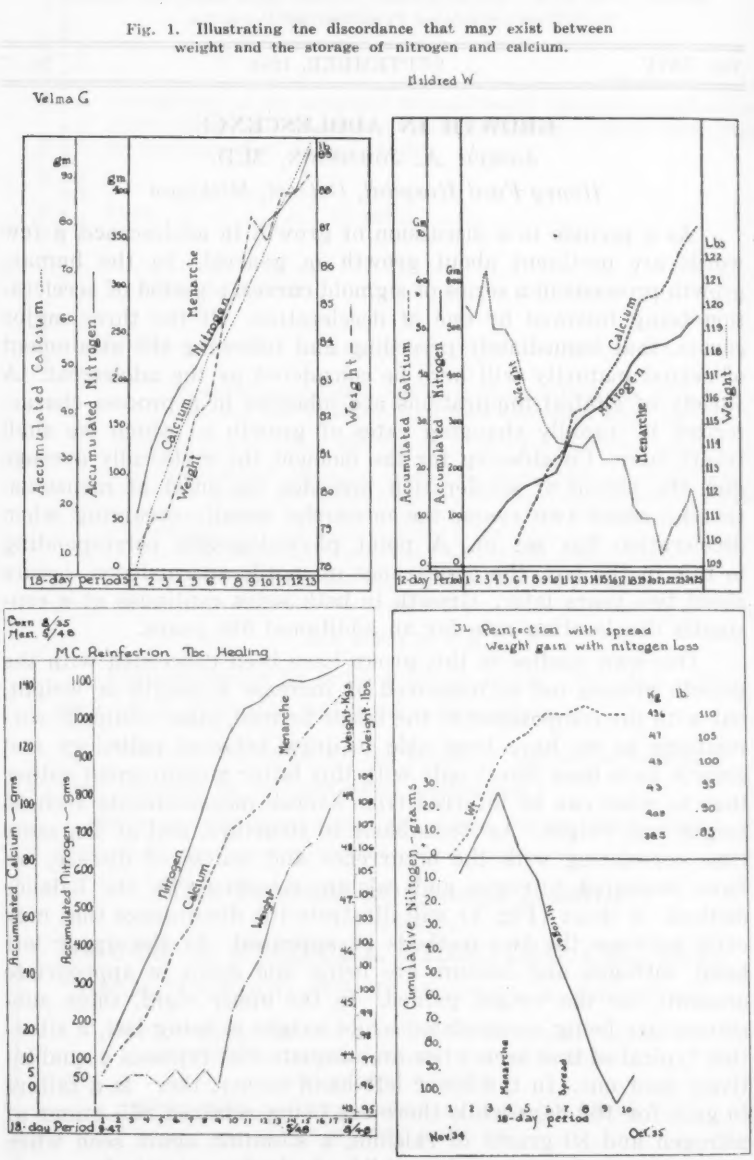
JOSEPH A. JOHNSTON, M.D.

Henry Ford Hospital, Detroit, Michigan

As a prelude to a discussion of growth in adolescence, a few words are pertinent about growth in general. In the human, growth proceeds in a series of sigmoid curves, a period of acceleration being followed by one of deceleration. Of the three major curves, that immediately preceding and following the attainment of sexual maturity will here be considered as the adolescent. A variety of clinical implications are inherent in a process characterized by rapidly changing rates of growth to which we shall revert later. Considering for the moment the mythically average girl, the period of acceleration precedes the onset of menstruation by about two years, the menarche usually occurring when deceleration has set in. A point physiologically corresponding to this in the boy, the appearance of motile spermatozoa, occurs about two years later. Growth in both sexes continues at a constantly decelerating rate for an additional five years.

Our own studies in this group have been concerned with the growth process not as measured by increase in length or weight, but with the composition of the tissue formed, since clinically correlations as we have been able to draw between pathology and growth have been direct only with this latter measurement rather than to what can be inferred from overall measurements such as height and weight. As items basic to structure, and at the same time correlating with the occurrence and course of disease, we have measured nitrogen and calcium retentions by the balance method. A chart (Fig. 1) will illustrate the discordance that may exist between the two methods of appraisal. In the upper left hand, nitrogen and calcium are being laid down in appropriate amounts for the weight gained. In the upper right, these substances are being accumulated while weight is being lost, a situation typical of that seen when an adequate diet replaces a qualitatively poor one. In the lower left hand corner, there is a failure to gain for 162 days while there are being retained 865 grams of nitrogen and 80 grams of calcium, a situation again seen when adequate protein is given to a child who had previously been on a

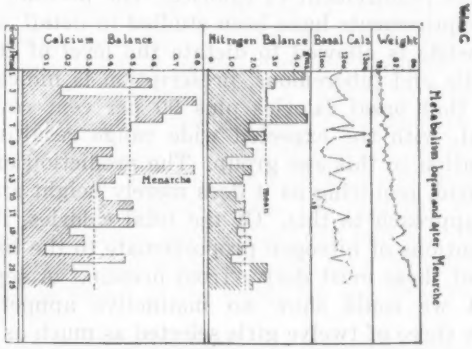
Fig. 1. Illustrating the discordance that may exist between weight and the storage of nitrogen and calcium.



high carbohydrate diet. In the lower right hand corner, weight was gained while nitrogen was lost, a phenomenon preceding, and we feel, often conditioning the activation of tuberculosis.

Normal adolescent growth is characterized in the pre-pubertal period by an avid retention of these substances, when supplied in sufficient quantity, and by a steadily diminishing ability to retain them when puberty is passed. As might be anticipated, the accelerated phase is accompanied by a rising rate of oxidation succeeded by a fall in basal metabolism in the post puberty period. (Fig. 2).

Fig. 2. Metabolism preceding and following menarche.



These are normal phenomena, but because they characterize a fluctuant rather than a steady state, are accompanied by more pathological variation than other periods. Thus, instances of hyper- and hypothyroidism are far more common at this age than in the ten years preceding adolescence, the increase preceding and the decrease following puberty going on to exaggerated levels.

Much of the concern of parents and adolescents themselves relates to the failure to appreciate the wide variations from the mean that exist in the occurrence of the phenomena of puberty and adolescence when these events are plotted against chronological age. Thus the pattern of growth in height is completely unpredictable until charted against physiological age. This is brought out strikingly in the studies of Greulich and Shuttleworth, and yet there is a predictable pattern, highly individual as regards time, in the unfolding of sexual maturity, which is tabulated in Table 1.

The time of the occurrence of the menarche shows in a New York study a mean of 13.5 years, in a Cleveland study of girls in the better economic circumstances, 12.5 years; there is a range of at least six years.

TABLE 1

MALE	FEMALE
1. Enlargement of testes and penis	1. Breast
2. Enlargement of breasts	2. Widening of pelvis with rounding hips
3. Pubic hair	3. Hypertrophy vaginal mucous membrane; pH change from 7.5 to 4.5
4. Axillary hair	4. Pubic hair (menarche)
5. Facial hair	5. Axillary hair
6. Voice change	
7. Spermatozoa	

Dietary Requirements of Adolescence:

The rising and falling of growth are paralleled directly by changes in the requirement of calories. The protein, calcium and vitamin D requirements have been studied in detail, and, while in general, appetite is allowed to dictate the level of total calories, in the diabetic and tuberculous, prescription is indicated, and we have found that basal calories plus 90 per cent cover with the average need, with the expected wide range resulting from the growth variation in this age group. The prediction of basal from the Wetzel grid, requiring as it does merely height and weight, is a practical approach to this. Of the total calories, it was found that for retentions of nitrogen proportionate to the tissue formed, 15 per cent of these must derive from protein. A separate study showed that we could show no instinctive apppetite for this amount; only three of twelve girls selected as much as 15 per cent, their choice of carbohydrate rather than protein having been conditioned by family dietary habits. In the case of calcium, it was found that normal retentions obtained with intakes of approximately 1.3 grams, the amount usually contained in a quart of milk. The amount of vitamin D needed in this climate in winter months was studied and increasing retentions paralleled increasing intakes; in the period of rapid growth preceding puberty we urge that 1000 units of D be used. These items would be covered by the following amounts of foodstuffs:

TABLE 2

	Protein (Gm.)	Calcium (Gm.)
Milk, 1 qt.	28.8	1.15
Egg	6.0	0.03
Meat, fish or cheese, 2 lg. Serv.	46.0	0.32
Cereal, 1 serv., and Bread, 3 serv.	13.0	0.07
Dessert, containing milk and egg	3.5	0.10
Total	97.3	1.67

Vitamin D — 1,000 U.S.P. units

The great majority of the "problems" of the adolescent represent physiological variants from the normal, requiring merely

understanding of the individuality of the growth pattern and the wide range of the time of occurrence of the phenomena. There are three pathological items to which I should like to call attention that arise more or less directly as a result of the altered metabolism of this period.

The sharp rise in the incidence of reinfection type tuberculosis is related in our study to the diminished ability to store nitrogen that characterizes the diminished growth rate following puberty unless the high requirement for protein at this age is fulfilled. In following over 1100 children known to react to tuberculin, there have occurred 36 instances of the reinfection type, a majority showing their reactivation in adolescence. It was our feeling that these children had held their processes under control until nutrition was undermined by a failure to meet adequately the exacting requirements for growth in adolescence.

The slipped epiphysis of the adolescent is sharply limited to the year of maximum growth and typically occurs in the adolescent who has been permitted to gain too rapidly. Whether there is a hormonal imbalance between growth and sex factors in the human is not proved, but we have shown that the small or negative calcium balances found in the condition can be offset with vitamin D.

Since these children typically are large and even obese we try to anticipate the possibility in this group and warn against too rapid a gain in weight by providing diets high in protein, calcium and vitamin D, but low in calories derived from carbohydrate. There would seem to be a reciprocal relationship between speed of growth and calcification.

Summary

Adolescent growth has been discussed from the standpoints of representing a single sigmoid segment of the entire growth process. The importance of physiological age rather than chronological age has been stressed. The composition of growth has been differentiated from its overall measurements. The dietary requirements have been described. Reference has been made to a few pathological conditions that characterize the period.

BIBLIOGRAPHY

1. Johnston, J. A.: Nutritional Studies in Adolescent Girls and Their Relation to Tuberculosis. 1953. C. C. Thomas, Springfield, Ill.
2. Shuttleworth, F. K.: Monographs of the Society for Research in Child Development, 1944, vol. 9, No. 1.
3. Greulich, W. W.: Some observations on the growth and development of adolescent children. J. Pediat., 19, 302 (Sept.) 1941.

COLOR BLIND?

by

IRA ONKEN, Science Teacher

and

LEONA L. WEAVER, Nurse

at

Skinner Junior High School, Denver, Colorado

Persons who enjoy the great range of color in nature, who use color to beautify their homes and clothing and who appreciate color allusion in literature may not realize the value of their own ability to differentiate the various colors with which they come into contact every day. There are five or six million people in this country who have normal vision except that they cannot recognize some colors. Many of these people do not know that it is possible to see colors except as they see them—in varying shades of gray.

Since so many of those who are color blind are not actually aware of their handicap, a recent testing program conducted in a junior high school of the Denver Public Schools has attempted to locate all such cases. It was hoped that by discovering the child's color blindness before he reached the senior high school level he would be more capable of coping with classroom problems now as well as in planning his future.

For 39 of the 1,209 students tested at Skinner Junior High it meant that air line, railroad, line officers in the armed services, weather bureau, dressmaking, and interior decorating occupations, to mention a few, would have to be eliminated.

Prior to the testing, information relative to the color vision test was given to each guidance teacher. After discussing the material, with the teachers present, the students were shown the series of seven slides, which were reproduced by the Department of Special Services of the Denver Public Schools from the plates originated by Dr. Shinohu Ishihara and published by the C. H. Stoelting Company. Permission to copy these slides for school use has been granted the Denver Public Schools by the Stoelting Company.

During the first testing 120 boys and 49 girls had missed two or more slides, but after a second session 130 of these were eliminated. The 39 who still missed two or more slides were considered to show a degree of color deficiency. Only one boy showed a partial degree of red-green deficiency while the 32 boys and 6 girls were considered to show a total degree of color deficiency.

TOTAL COLOR BLINDED

Grade	Number of students tested	Male Positive	Female Positive
7B	421	15	3
7A	92	3	1
8B	256	5	0
9B	354	9	2
9A	86	0	0
—	1209	32	6

Those students who showed a tendency to have a certain degree of color blindness were reported to their guidance teachers and relative information was placed on both their individual school cummulative records and school medical record. In addition to a descriptive letter being sent to the parents of the 39 color deficient students, a list of the possible color deficient children was given to each art teacher at Skinner.

It may be interesting to note that 15 of the 38 (38.46%) wear glasses and 3 of the 15 are in Skinner's sight conservation class. The one student that showed the red-green deficiency does not wear glasses. (Of the total 1,209 students, 26.38% wear glasses.)

STUDENTS WEARING GLASSES

Grade	Number of pupils wearing glasses that were T.C.B.*	Percent of those wearing glasses that were T.C.B.* of total number tested
7B	8	1.90%
7A	0	0.00%
8B	2	0.78%
9B	5	1.41%
9A	0	0.00%

*T.C.B.—Totally color blind.

One boy's color vision may have been complicated by diabetes, but the others gave no history of any deficiency disease. Heredity seems to have played the larger part, however. While 27 gave no color blind family history, 12 children (3 girls and 9 boys) listed maternal and paternal grandparents, father, an uncle, mother, brother, or cousin who are color blind. Some recalled cousins and brothers being rejected from the aviation branches of military service because of color blindness.

According to a recent national survey, 3% of white boys and 0.4% of white girls show a relative color deficiency. Skinner Junior High compared favorably with these national figures as it had 2.72% male and 0.49% female results.

Only 2 of the 39 realized they were color blind, and families of 3 others only suspected the defect—2 of these because of doctors' diagnosis. One ninth grade boy remembered the color of aspen leaves changing in the fall as a dullish brown-gray. One teacher reported that another boy, despite brilliant sketch work in art, colors all his drawings a dark dismal green.

One day, soon after the results of the test had been sent home to the parents, a very indignant seventh grade girl clad in a dull brown blouse and an even duller gray skirt stormed into Skinner's clinic and said, "No one's going to tell me I'm color blind. In fact, I just adore bright colors."

The realization of such a defect is like other misfortunes, often disheartening to a certain extent, but with the knowledge Skinner's testing has uncovered it is hoped to ward off greater disappointments in the future.

* * * *

EVALUATION COMMITTEE

The Evaluation Committee of the School Health Section of the American Public Health Association, in cooperation with the American Association for Health, Physical Education, and Recreation, and the American School Health Association, plans to develop a consultation service in program evaluation for school health.

This committee has assembled copies of evaluation tools such as checklists and other forms proven useful in the evaluation of school health programs. You are invited to send copies of other such materials and reyorts of evaluation studies to the chairman or to examine those already available. Mimeographed copies of *Research Underway and Research Needed* are available from the AAHPER.

Consultants have been appointed to assist in planning evaluation studies.

The committee would appreciate suggestions as to effective uses of its services.

Please send your suggestions, materials, and requests for service to Wesley P. Cushman, Chairman, The Ohio State University, Columbus, Ohio.

I SCHOOL ACCREDITATION IN THE RIVERSIDE SANATORIUM DISTRICT

Report of the Meeting of the Committee on Tuberculosis of the American School Health Association at Atlantic City, May 18, 1954

Granite Falls, Minnesota

*LEWIS S. JORDAN, M.D.

Since 1930 Mantoux testing has been carried on in the schools of the four counties of the Riverside Sanatorium District. Both rural and urban schools have been included. This program has been followed up routinely every two years.

In 1943, after carefully reviewing the work that had been done, a sub-committee to study tuberculosis in the schools was appointed by the Committee on Tuberculosis of the American School Health Association. This sub-committee consisted of Dr. E. A. Meyerding, St. Paul; Dr. S. A. Slater, Worthington, and myself.

The committee prepared standards, by which, if met, individual schools would be accredited and certificates awarded, with reference to their successful completion of a tuberculosis detection program. Those schools meeting the following qualifications offered a "Class A" certificate.

1. Testing from 95 to 100 per cent of the pupils and making x-ray inspection of all reactors each year. Those schools with 100 per cent response are given an additional gold star on the certificate.
2. Testing 100 per cent of school personnel and making x-ray film inspection of the chests of all reactors. This is to include teachers, janitors, bus drivers, cooks, clerical help, etc.
3. Completing the examination of all who present x-ray shadows which might be caused by a tuberculosis lesion.
4. Conducting an educational program for the staff of each school, so that the fundamentals of tuberculosis control are understood.
5. All non-reactors to tuberculin are retested each two years.
6. All reactors are advised to be x-rayed each year, unless more frequent inspection is especially indicated.

A "Class B" certificate was set up for those who were unable to meet the requirements for a "Class A" accreditation. For this the requirements are exactly the same as for "Class A," except that only 80 to 95 per cent of the pupils were tested.

In the fall of 1943 work was begun to attempt to certify as many schools as possible under this new program adopted by the American School Health Association. This work has been followed through since that time by the Minnesota Tuberculosis and Health Association and several of the Sanatorium Districts in this state.

*Superintendent and Medical Director, Riverside Sanatorium, Granite Falls, Minnesota.

We have many schools in our district which have received six certification awards, this covering a period of 12 years. Well over 2000 schools have been certified in the State of Minnesota. This program has a three-fold purpose as follows:

1. To detect the reactors to tuberculin (those who are infected with tubercle bacilli) who are to be carefully checked by x-ray film annually. It is from this group that we can expect our clinical cases of tuberculosis to develop in the future.
2. When a reactor is found we carefully check all adult contacts in the home and neighborhood, to locate the contagious case responsible for infecting the child. Often this leads to an unsuspected, undiagnosed case of pulmonary tuberculosis, which can be put under control.
3. It alerts the individual and parents to the fact that periodic examinations are essential and the reactor is a potential case of clinical tuberculosis.

As a result of following this program we can present many instances of schools which 20 years ago had an incidence of positive reactors as high as 30 per cent, which today are down to 2 or 3 per cent. We can show many scores of schools which now have not a single reactor to the tuberculin test, which 20 years ago had 10 to 13 per cent reactors. We have found the sources of infection and shut off the fountain-head of tubercle bacilli.

There have been active cases of tuberculosis, with positive sputum, in high school students who were participating in athletics such as football, basketball and track. There have been found teachers, janitors, bus drivers and cooks with active pulmonary tuberculosis and positive sputum, all unsuspected. There have been found secretaries and teachers who were suffering from advanced terminal tuberculosis. These sources of contagion were removed from the schools immediately; in many instances before serious damage had been done.

We are often asked, "Why not use the mobile x-ray unit in this school work?" Our answer is, x-ray detects only gross pathology. It does not tell who is harboring tubercle bacilli in his or her body. Much damage may be done by the time pathology is located by x-ray film. Why use a coarse, very coarse, screen when we have the finest and a most exact screen for detection of tubercle bacilli in the Mantoux test? A reactor who is harboring tubercle bacilli must have routine x-ray film follow-up and every effort should be made to seek out and isolate the source of infection.

It is often said that Mantoux surveys do not justify themselves, as so little pathology is found in the x-ray films. This is not true. We do see evidence of pathology in the films of these school children. We see increase in the size of the bronchial and the

peri-bronchial shadows, the hilum lymph node shadows and calcium deposits forming. This we can carefully observe in our plan of periodical x-ray film study, watching them retrogress or occasionally progress. In the latter, this is the time to act, before actual pulmonary destruction occurs. Ours has proved a most popular health asset to our schools. We have had 100 per cent cooperation of the local and state medical associations. Parent-Teacher Associations and school boards demand this work. It has been thoroughly sold and we are more than pleased to continue.

Most of our local school boards have made it mandatory that school employees prove themselves not to be a source of infection of tuberculosis before their contracts are signed. A negative Mantoux test is sufficient, but if a reactor, a chest x-ray film is taken.

This is a method, not only to control and reduce infection with tubercle bacilli, but to eventually eradicate it.

In 1930 when this work was started it was found that 13.9 per cent of all our school enrollments were reactors to the tuberculin test. Thirteen and nine-tenths (13.9) per cent of the pupils were already infected with tubercle bacilli. In the 1954 survey, this had been reduced to 2 per cent reactors in our rural schools and 3.2 in our urban schools. A summary of the accreditation program in the four counties of Riverside Sanatorium District for 1954 is as follows:

Total Number of Schools Tested	175
Number of Certificates Awarded	157
1. Class "A"—100 per cent	108
3. Class "B"—85-95 per cent	22
2. Class "A"—95-99 per cent	27
Total enrollment of schools tested, (Rural) 1975. Percentage of rural students tested	95.2 per cent
Total enrollment of schools tested, (Urban) 13877. Percentage of urban students tested	95.7 per cent
Total percentage of positive reactors combined	31.1 per cent
Total per cent of reactors, (Urban)	3.2 per cent
Total per cent of reactors, (Rural)	2.07 per cent
Total number schools 100 per cent tested, no reactors	79 per cent

We have all the tools necessary, the Mantoux test and the x-ray film if used diligently and persistently, not only to control but *eventually to eradicate* tuberculosis. Stop infection at its source, seek out the open case, cure or isolate it, stop infecting the oncoming generations.

DISCUSSION BY DR. S. A. SLATER

Medical Director Southwestern Minnesota Sanatorium

The work Dr. Jordan has been doing impresses me as being one of the most valuable and soundest in the fight to eradicate tuberculosis. There is no better place to start a tuberculosis program than in the schools. To have the schools work to accomplish something they can see, such as becoming accredited, makes a lasting impression on the pupil which will follow him through life. Comparative figures with those in the beginning show that much has been accomplished and real results have been obtained.

It was just 30 years ago this year that I read a paper at the annual meeting of the National Tuberculosis Association in Atlanta giving the results of tuberculin testing in the schools of Minnesota. The continuation of tuberculin testing in the schools of my district has been most helpful in lowering the death rate from tuberculosis. When the sanatorium was opened in 1919 with 8 counties comprising the district there were 67 deaths in these counties from tuberculosis, last year there was only one death and the cause of that one was questionable.

There is another thing I would like to mention and that is having the cooperation of the family physician. No program will be successful without his cooperation and the success of any program is in proportion to his interest and cooperation. I think Dr. Jordan's success has been the result of the interest the family physician has taken. The result Dr. Jordan has obtained has been excellent and he is working in a fertile field where real results can be obtained.

DISCUSSION BY DR. JOHN W. TOWEY

Medical Director Pinenest Sanatorium, Powers, Michigan

With our marked decrease in morbidity and mortality from tuberculosis it becomes more evident that in our final fight against tuberculosis, tuberculin testing, will assume a most prominent part in our case-finding program. It has been well stated by Dr. J. A. Myers, "Our final fight must be made directly against the tubercle bacillus."

Dr. James Waring, of Denver, leaves us with the impression that the time interval between infection and development of manifest disease is comparatively short. We have been conducting tuberculin surveys now for a period of thirty years, we have come to feel that as a general rule there is a period of years between

infection and development of manifest disease. We have no Negroes in our area, and seldom do we see the fulminating progressive type of primary disease seen in certain sections of our country. At the same time I am in full concurrence, that a positive tuberculin in infants is a serious affair, and it is our policy to treat these children, particularly where the positive tuberculin is associated with positive gastric findings.

The Veterans Administration could have some valuable information within the next few years pertaining to infection and disease. All employees of the Veterans Administration are tuberculin tested and x-rayed periodically. Just this morning I have discussed this matter with Dr. Snyder, the statistical expert for the Veterans Administration, and he advised me that they have a four year record covering thousands of employees in the Veterans Administration service. In a few years with that regimented group, they should be able to come up with answers to some of our problems.

* * * *

REPORT OF A RECENT SURVEY ON CLASSES IN HOME NURSERY

Hammond Public Schools—Hammond, Indiana

Early this spring, the superintendent, Mr. Caldwell, and I were discussing the advisability of offering a class in Home Nursing in the High Schools. I was of the opinion that there was not enough interest to warrant the expense in equipment and personnel. Basing this opinion on previous experiences, I felt that there was more student interest in the child care and development part of the course, than in the actual Home Nursing and care of the sick. The Denver study on "The Health Interests of Children" substantiates this idea. A questionaire was developed and sent out on May 11, 1954.

We chose the schools from the North Central Association with three and four year programs and enrollment of 1000 to 2000 students. 101 letters were sent to the principals by name. 93 were returned and the following results were tabulated from 89 completed forms:

30 Schools had full time school nurses.
43 Schools had classes in Home Nursing.
25-30 was the average enrollment.
30 Classes were taught by Home Ec Teachers.
6 Classes were taught by Nurses.
3 Classes were taught by Physical Ed teachers.
1 Class was taught by Visiting teacher.
6 Classes were taught by A.R.C. instructors sent to school for just that class.

(*Continued on Page 201*)

THE TUBERCULIN TEST AS A GUIDE TO THE EPIDEMIOLOGY OF TUBERCULOSIS IN SCHOOL CHILDREN

DAVID T. SMITH, M.D.
Professor of Bacteriology and Associate Professor of Medicine
Duke University School of Medicine
Durham, North Carolina

The tuberculin skin test and the Schick test are probably the two most important tests ever discovered by medical science. The Schick test differentiates those children who are susceptible to diphtheria from those who are immune and enables us to evaluate the effectiveness of various types of diphtheria toxoid immunization procedures without subjecting the child to the hazards of actual exposure to diphtheria. The combination of the Schick test to determine susceptibility and the toxoid injections to induce immunity has practically eliminated diphtheria from the school population.

Both tests, when positive, give a red reaction in the skin 48 to 72 hours after injection. The cause of the red reaction is quite different in the two tests. The red reaction in the positive Schick test is caused by injury to the tissue by the toxin contained in the Schick test solution. If antitoxin is present in the serum of the patient then the toxin is neutralized and there is no damage to the tissue and no red reaction at the site of the injection.

The tubercoloprotein which is contained in the tuberculin solution is harmless when injected into an individual who has never had living tubercle bacilli in his tissues but reacts with antibodies in the cells if the individual has been infected. The local area is damaged by this allergic reaction and develops a red spot which is read as a positive tuberculin test. When properly performed the tuberculin test tells us which individuals have been infected with living tubercle bacilli and therefore, which individuals may subsequently become ill with tuberculosis.

The importance of the tuberculin test in the program for the elimination of tuberculosis cannot be overestimated. The percentage of positive tuberculin reactors is an indirect measure of the amount of undetected open tuberculosis in the community. The presence of a positive tuberculin test pinpoints the individuals which comprise the group in which new active cases will develop. The discovery of a recent conversion from a negative to a positive tuberculin reaction means that there is a known or unknown active case among the converter's associates.

The low percentage of positive tuberculin reactors in school children of Wisconsin, Minnesota, and other midwestern states gives a false sense of security about the total number of reactors in the entire population. A county in Minnesota, with a tuberculin reaction rate in its school children of about 5 per cent, conducted a county-wide tuberculin survey and found a positive reaction rate of over 50 per cent in individuals over 50 years of age.

There is a rough correlation between the percentage of the population with positive tuberculin reactions and the number of clinical cases and the number of deaths from tuberculosis. When there was almost universal saturation of the population with tubercle bacilli as shown by almost 100 per cent positive tuberculin reactions by the age of 20, it was found that the peak in the deaths was in infancy and in young adults. As tuberculosis was detected and isolated in sanatoriums for treatment there was a rapid decrease in infant mortality and an abolition of the peak of deaths in young adults. This change was accompanied by a reduction in positive tuberculin reactors in school children from nearly 50 per cent to about 5 per cent.

Annual tuberculin test in school children is the most sensitive measure of effectiveness of the overall control program and should be continued until the control program has eliminated all spreaders of the disease and the school children all have negative tuberculin tests.

DISCUSSION BY H. D. LEES, M.D.

Director Student Health Service
University of Pennsylvania, Philadelphia

Up to the present time the tuberculin test has been used most extensively in children. Great emphasis has been placed on its value in detecting evidence of tuberculosis in the younger age groups. However, with the marked decrease in the prevalence of tuberculosis infection observed in recent years among our adult population, the test becomes one of our most valuable weapons for the detection and ultimate control of tuberculosis. At the University of Pennsylvania we have used the Mantoux method of tuberculin testing among our students since 1931. In that year 52 per cent of entering, undergradute students were reactors. In September, 1953, the entering class showed only 14.2 per cent to be reactors. Students admitted to our professional schools show a similar and significant decline in the prevalence of infection. Since

1950, reactions among first year medical students have been below 25 per cent, whereas in the earlier years they were quite consistently from 60 to 70 per cent. Such evidence indicates quite clearly that the communities from which our students come offer much less opportunity for infection with tubercle bacilli than they did ten to twenty years ago.

Many medical schools have had quite serious problems in the past in attempting to control tuberculosis among their students. At the University of Pennsylvania it was not unusual for us to have five to ten students develop pulmonary lesions during the school year. Practically all students who entered medical school as non-reactors to tuberculin converted before graduation. The tuberculin test, applied at intervals of 3 months to all non-reactors, proved most valuable to us in pin-pointing those phases of training which provided the highest attack rates of tuberculosis infection. By careful planning it was not difficult to practically eliminate most of the more hazardous sources of infection. Results have been most gratifying since no medical student has developed tuberculous disease during the past 5 years.

In planning for the future control of tuberculosis on a community-wide basis, we must be guided by current trends with relation to the prevalence of infection and must give special consideration to the older age groups, especially males. It is not sound practice nor is it economical to conduct an X-ray survey involving thousands of persons, if 60 per cent or more of the entire group have never been infected with tubercle bacilli. Yet this is common practice today, since many county organizations include more school children than adults in their survey work. If we are to make our search for the unknown and the early case of tuberculosis more effective, we must know which persons are harboring tubercle bacilli. These are the potential cases of tuberculosis of the future. All such persons should have periodic chest X-ray films. Such a program of tuberculin testing of all age groups and regular X-ray supervision of reactors will involve a great deal more organizational effort. But only through such methods can we hope to adequately control tuberculosis.

TO MEMBERS OF THE POLICIES AND PRACTICES COMMITTEE, AMERICAN SCHOOL HEALTH ASSOCIATION

Dear Member:

Those of you who attended the annual meeting of our organization know how hard we worked to produce a brief outline of our guide. Members who were unable to come should know that we did our best to work out an outline which would represent the thinking of as many people as possible.

From the minutes of the meetings of the committee, you will see that there is much more to be done on the outline as far as the more detailed writing of each section is concerned. A small group met to discuss what suggestions could be given to the states writing the separate sections. Briefly these items seemed to be the thinking of the group:

I. The minutes of the meeting of the whole group give the ideas and thoughts as to the detail of the writing.

II. It was thought that if possible, the nurses in attendance at the New York meeting should be included on the committee for the writing of the section.

III. That though the section should be written primarily by the school nurses themselves, the opinions and ideas of co-workers would be a valued contribution to the end results—a guide for school nurses.

IV. Since this guide is to be of value to all areas of the country for the nurse working alone and to help groups of nurses set up standards, it must be specific, without being detailed. It must be useful to nurses as a broad guide in setting up their own policies and procedures for their own situations and specific areas; yet it must contain specific criteria and goals—The final product—a guide for school nurses—the recommendations of the school nursing committee of the American School Health Association—must be the type of writing that the principal or superintendent could refer to for standards for his health program, or for evaluation on existing program. So also, can the school nurse look objectively at her own program or judge another program by the guide approved by this organization.

Thank you for your help in the past year, and for sending manuals prepared in your own states. These will be of value to those who will be working on the preparation of the guide during the coming year.

LYDA SMILEY, *Chairman*

TWENTY-EIGHTH ANNUAL MEETING
of the
AMERICAN SCHOOL HEALTH ASSOCIATION
BUFFALO, N. Y., OCTOBER 10 THROUGH 15, 1954
HEADQUARTERS, HOTEL STATLER

Sunday, Oct. 10

9:30 to 11:00 A.M.

HEADQUARTERS ROOM, HOTEL STATLER

2:00 to 4:00 P.M. COMMITTEE MEETING

4:00 to 6:00 P.M. FIRST COUNCIL MEETING

Presiding: H. F. Kilander, Ph.D., President.

7:30 to 10:00 P.M. SECOND COUNCIL MEETING

Monday, Oct. 11

9:30 to 11:00 A.M.

First General Session

ASSEMBLY HALL, MUNICIPAL AUDITORIUM

Presiding: Kenneth R. Gibson, D.D.S., President-Elect

"Health Education Through Radio and Television:"

Radio and Television Presentations.

Radio—Excerpts of School Broadcast "What's News."

(Interpretation of current medical information)—

Miss Martha A. Cable

Telecast—Demonstration of lesson for classroom instruction.

"Function and Care of the Eyes."

Ralph C. Lanciano, M.D.

Discussion—Ruth H. Weaver, M.D.

"Evaluation of the Total School Health Program."

Dora Hicks, Ed.D.

(Order of speakers depends on radio-television time)

11:00 A.M.

BUSINESS SESSION

Presiding: H. F. Kilander, Ph.D., President.

Report of the President.

Report of the Secretary, A. O. DeWeese, M.D.

Election of Council Members.

Report of Committee on Mental Hygiene in the Classroom, Jennelle Moorhead, M.S., Chairman.

Report of Committee on the School Lunch Program, O. Robert Koopman, A.B., A.M., Chairman.

2:30 P.M.

SECTION MEETINGS

Health Service Section

NORTH HALL—MUNICIPAL AUDITORIUM

Presiding: Ruth H. Weaver, M.D.

Panel—"The Evaluation of School Health Services."

Moderator: Arthur F. Davis, Dr. P.H.

L. N. Corliss, M.D.
David B. Ast, D.D.S.
Mrs. Madeline Roessler, R.N.
Mrs. Elmer Milch
Mrs. Loretta K. Oliger

School Health Education Section

EAST MEETING ROOM—MUNICIPAL AUDITORIUM

Presiding: Dora Hicks, Ed.D.

"Field Experiences in Health Education for Prospective Teachers."
Edward B. Johns, Ed.D.

"Techniques of Inservice Health Education in the Public Schools."
W. K. Streit, Ed.D.

"Selecting and Filing Resource Materials in Health Education for Teachers and Pupils."
Miss Katherine Rahl, M.S.

School Health Nursing Section

WEST MEETING ROOM—MUNICIPAL AUDITORIUM

Presiding: Lyda M. Smiley, P.H.N.

"School Nursing Leadership — A Must."
Gertrude Cromwell, R.N., M.S.

Effects of the School on the Mental Health of Children."
Helen T. Watson, R.N., M.S.

Progress Report on School Nursing Policies and Practices Committee.

4:30 to 6:30 P.M.

THIRD COUNCIL MEETING
HEADQUARTERS ROOM, HOTEL STATLER

8:00 P.M.

Second General Session
GRAND BALLROOM, HOTEL STATLER
Presiding: H. F. Kilander, Ph.D., President.

"Nutritional Needs of School Children."
Austin E. Hill, M.D.

"Mental Health—Keystone of Education."
Dana L. Farnsworth, M.D.

Panel—"Education Policies Commission Report on School Athletics."
Elmer B. Cottrell, Ed.D.

Participants:

Paul E. Landis, Ohio State Department of Education
Orlo W. Miller, Wisconsin State Department of Public Instruction, Madison
Delbert Oberteuffer, Ohio State University, Columbus
J. Keogh Rash, Indiana University, Bloomington
John H. Shaw, Syracuse University, Syracuse, New York
Elmer B. Cottrell, Pennsylvania State Department of Public Instruction, Harrisburg—Leader.
Elsa Schneider, Dept. of Health, Education and Welfare, Washington, D. C.

Wednesday, Oct. 13
6:30 P.M.

Annual Banquet
American School Health Association
BUFFALO ROOM, HOTEL STATLER
Presiding: H. F. Kilander, Ph.D., President.
Speaker: *W. W. Bauer, M.D.*
Director Bureau of Health Education
American Medical Association.
"Progress, Problems, and Prospects."
Presentation of the William A. Howe Award to:
Miss Gertrude Cromwell, R.N., M.S., Supervisor of School Nurses, Denver Public Schools.
Presentation by A. O. DeWeese, M.D.
Response by Recipient
Greeting from American Public Health Association.
"Our Foundations—Organizing in Buffalo, Octboer 13, 1926" by Dr. Charles H. Keene.
Installation of Officers.

Thursday, Oct. 14
4:30 to 6:30 P.M.

FOURTH COUNCIL MEETING
HEADQUARTERS ROOM, HOTEL STATLER

JOINT SESSIONS WITH SECTIONS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

(preliminary partial report.)

Tuesday, October 12, 9:30 A.M.

With: School Health Section APHA. *Presiding*: Dr. Elizabeth Avery.

Tuesday, October 12, 2:30 P.M.

With: Maternal and Child Health, School Health, and Dental Health Sections, APHA, and the American School Health Association.
Title: "Studies to Evaluate Health Services to Children."

Wednesday, October 13, 9:30 A.M.

With: Foods and Nutrition, Dental Health, and School Health Sections, APHA, and the American School Health Association.
Title: To be announced (Paper is expected to cover report on studies on the nutritional status and development of children as affected by diet).
With: Maternal & Child Health and Public Health Nursing Section APHA.
Title: "Studies to Evaluate Health Services to Children."
Presiding: Edward Davens, M.D.

Thursday, afternoon, October 14

With: Maternal and Child Health, Public Health Nursing, and School Health Sections APHA.
Title: "Special Problems of Handicapped Children."

Friday, October 15, 9:30 A.M.

With: School Health Section APHA. *Presiding*: Dr. Charles C. Wilson.

MEETING—EXPERIENCE WITH POLIO VACCINE

Experience with the inoculation, now going on of one and one-half million children with the Salk vaccine for poliomyelitis will be presented at the 82nd Annual Meeeting of the American Public Health Association in the Memorial Auditorium, Buffalo, N. Y., October 11 to 15.

The session on polio vaccine will be one of 75 scientific sessions to which 400 speakers will contribute, according to Dr. Reginald M. Atwater, the Association's Executive Secretary. Another will consider the impact of suburbanization on public health. "What is happening to our cities as families move to the suburbs," Dr. Atwater said, "and the needs of growing new communities, have important implications for public health, medicine, and the social sciences. Housing, nursing, medical care, hospitals, school health services, clinics—all are involved."

Since 1872, Dr. Atwater said, the Annual Meetings of the American Public Health Association have served to bring new knowledge of disease prevention and health protection to public health workers everywhere. Five thousand or more health authorities from all parts of the free world will assemble at Buffalo this Fall to gather information about the latest developments in public health practice and techniques for application in their communities back home.

The Buffalo Annual Meeting program of the APHA will include sessions on chronic diseases; carcinogens; viral diseases; enteric infections; air sanitation; radiological health; fluoridation; the newer insecticides; nutrition services in institutions; new developments in food, water and milk protection and sanitation; improving medical and hospital care; health supervision of well young children; care of handicapped children; industrial health."

The Sedgwick Memorial Medal, for distinguished service in public health, will be presented on Tuesday evening, October 12, and the Lasker Awards for 1954, for notable achievement in medical research and public health administration, on Thursday evening, October 14.

Local arrangements for the Annual Meeting are being made by a committee under the chairmanship of Dr. Berwyn F. Mattison, Health Commissioner of Erie County.

REVIEWS

"Health for Effective Living." *Edward B. Johns, Wilfred C. Sutton, Lloyd E. Webster,* McGraw Hill Book Company, 1954, New York 36, N. Y. pp. 473, Price $4.75.

Designed and written for college freshmen or sophomores, this text is aimed at changing favorably the health behavior of these students.

The eighteen chapters are divided into six parts:

(1) Orientation in Health Education;
(2) Developing a Healthy Personality;
(3) Preparing for Effective Family Living;
(4) Developing and Maintaining Health;
(5) Building Defenses for Effective Living;
(6) Effective Living in the Community.

The modern concepts of emphasis on life and living are particularly valuable and needed for these young people to protect their own health and to give them information which is essential for those about to become heads of families, citizens in the communities, and — many of them — teachers in our schools, where facts, rather than talk, are so badly needed.

The reviewer is particularly sympathetic to the material on "Food Fads and Fallacies." The constant flood of misleading statements poured into our homes via radio and television is probably the major obstacle to "effective living."

This is a valuable addition to the growing library of modern health education texts, which should be a fundamental for source material, and as a text in the area of college health education.—*Charles H. Keene.*

"Tests and Measurements in Health and Physical Education." *Charles H. McCloy* and *Norma D. Young,* Appleton Century-Crofts, Inc., New York, N. Y., 1954, Third Edition, pp. 497, Price $6.75.

For fifteen years, ever since the first edition of this text appeared under authorship of Charles H. McCloy, "Tests and Measurements in Health and Physical Education" has been generally accepted as a foundation text in this area of training.

The thorough revision of the older material and inclusion of some fifteen chapters that are practically new, has made this text a real leader in tests and measurements, and also in the field of scientific teacher training in this specialty.

It is a necessity for all teachers and for mature minded students in health and physical education.—*Charles H. Keene.*

NEWS — NOTES

To School Administrators—It is a pleasure to announce the appointment of Miss Elizabeth Hyde Kasey, M.P.H., as a member of the Safety and Occupational Health Bureau of the Health and Welfare Division, under the direction of Dr. William J. McConnell, Associate Medical Director. Miss Kasey came to the Metropolitan after several years as Chief Health Educator of the San Jose, California, Health Department where she developed an outstanding program in coordinating safety activities in the community. Miss Kasey will have responsibility for Metropolitan's home, child, and community accident prevention program.

* * * *

State Teachers College at Cortland, N. Y., announces that Ross L. Allen has been promoted to Director of Education at State University Teachers College, Cortland, New York. In his new position, Dr. Allen will direct the Division of Physical Education, Health Education, and Recreation Education. Since 1945, Dr. Allen has been Professor of Health Education and Chairman of the Department of Health Education..

Dr. Allen received his B.S. in Education with a major in health, physical education and recreation in 1927 from the University of Michigan. He was granted the M.S.P.H. in 1934 and the Dr.P.H. in 1936 from the same institution.

His professional background includes experience with the American Child Health Association, the American Physical Education Association, the American Camping Association; teaching experience in the Rochester Public Schools, the University of Michigan and the University of Wisconsin. He is a fellow of the American Public Health Association, the American School Health Association, and the American Association for the Advancement of Science.

* * * *

(*Continued from page 191*)

22 Nurses taught units or demonstrations in Home Ec classes or Health classes.
These units lasted from a demonstration to 18 weeks of a unit, but averaged about 4 weeks.
18 Nurses sponsored some club activity.
35 Schools had pre-nursing or future nurses clubs.
These were sponsored by—

To the question—"Why was the course in Home Nursing discontinued if you ever had one?"—the answers were few and about the same.

1. Not enough personnel—nurse needed for counseling and total health program.
2. Lack of interest among students.

—Patricia Hilliard, *Director of Nurses*

RHODE ISLAND STATE NURSES CONTRIBUTION TOWARDS RAISING THE STANDARDS AND STATUS OF SCHOOL NURSES

At a meeting of the School Nurses Section of the State Organization of Public Health Nurses held on January 9, 1947, a committee was formed to study the personnel policies of school nurses employed by boards of education. Since one of the Providence school nurses holds a certificate of Health and Hygiene in another state, she was elected chairman of a committee consisting of two other nurses.

The committee met with the President of Rhode Island Institute of Instruction to ask his assistance in helping the nurses to obtain teacher-nurse certification. The President became a valued member ex-officio to the group attending all subsequent meetings and guiding the group through the successful completion of its objectives. The R. I. Institute of Instruction is the professional organization of the teachers of Rhode Island. It is this organization that is responsible for professional improvement and all matters pertaining to teacher welfare.

The committee then contacted the chairman of the House Finance Committee, who arranged a meeting between the nurses committee and the Governor. The Governor recommended that the nurses take up the matter of certification with the State Director of Education and that if he would grant the nurses, teacher-certification, the Governor would then increase the amount of State aid allocated annually for grants of $600 for every teacher in the state, to also include the nurses.

Later the committee met with the Director who agreed to work for certification of the school nurses upon the condition that the school nurses fulfill the requirements to be set up. In September, 1947, a bill was passed requiring certification of school nurses employed by Boards of Education in Rhode Island.

After this, a committee composed of the following fourteen members was named by the State Director of Education: Deputy Commissioner of Education, Director of State Department of Health, Consultant of Health and Physical Education, Vice-President of Rhode Island College of Education, Assistant Diocesan Director of Parochial Schools, Nursing Director of Rhode Island Department of Health, four Superintendents of Public Schools, Supervisor of Parochial School Nurses, Director of District Nursing Association, and one School Nurse. This committee was to set

up a program of study through which nurses might qualify. Applicants must meet the following requirements:

1. Graduation from an accredited school of nursing.
2. Registration in Rhode Island.
3. One course in the required program of study must be taken in each semester and a total of 4 credits acquired in a school year.
4. Completion of the thirty semester hours in an eight year period.

The above committee was found to be too large; so the State Director of Education appointed a smaller group to carry on the work. This group consisted of the Deputy Commissioner of Education, Vice-President of Rhode Island College of Education, Nursing Director of Rhode Island State Department of Health, Supervisor of Providence Public School Nurses, Consultant of State Department of Health and a school nurse.

Nurses who had had fifteen years experience in the field of school nursing as of July 1, 1949, were allowed eight credits toward certification. A provisional certificate is granted yearly until the nurse has completed thirty semester hours of required study, at which time a five-year professional certificate is issued, which may be renewed by the nurse after or upon obtaining six more points of credit.

Only school nurses employed by Boards of Education are eligible to receive the school nurse-teacher certification. But all nurses doing full or part-time school nursing in public, private, or parochial schools are eligible to attend the classes at the Rhode Island College of Education and are encouraged to do so. No tuition is required for residents of Rhode Island.

We take just pride in what the School Nurses Section has accomplished in the past few years.

1. In October of 1947 we became an affiliated organization of the Rhode Island Institute of Instruction. We have a two-day program each year at the Teachers' Institute in October.
2. Two years ago the school nurses joined the Rhode Island Health, Physical Education and Recreation Association.
3. We have, with the assistance of the State Department of Education and the Rhode Island College of Education, set up standards for qualified school-nursing service.

4. We have given representation on the committee responsible for providing free educational opportunities for school nurses in Rhode Island.
5. We have provided informative meetings.
6. We have been active in improving the economic status of nurses employed by Boards of Education, through salary increases and liberal retirement provisions.

The committee of school administrators and public health nurses appointed by the Director of Education is now trying to work through the Rhode Island College of Education for courses for school nurses working for a degree.

At present there are 50 nurse-teachers in Rhode Island working under Boards of Education. Of these, twenty have completed the thirty semester hours of study and qualified for a five-year professional certificate.

1. On the state level, courses have been initiated for parochial school teachers in School Health Education at Catholic Teachers' College for which four credits are given.
2. The state also offers consultant service to all superintendents and school nurses in the State by Rhode Island Department of Health exclusive of Providence, as in Rhode Island there is no school nursing consultant in the Department of Education on a State level.
3. Invitation was extended by the Commissioner of Education to the State Consultant to speak for two consecutive years at the Annual Meeting of School Superintendents.
4. We have been given representation on the committee responsible for providing free educational opportunities for school nurses in Rhode Island.
5. With the assistance of specialists throughout the State, a School Nurses' Manual was edited last year.
6. Plans are now under way for State-wide Diocesan School Health Council.

We, the school nurses in Rhode Island, feel that much has been accomplished within the past six years to raise the status and standards of the school nurses. We realize that this was achieved only through the very fine cooperation of our Departments of Education, Health and Government.

*Submitted by the Committee on Mental Hygiene in the Classroom.